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PATENT

Attorney Reference Number 3382-66954-01
Application Number 10/680,072

Amendments to the Claims

1. (Currently amended) In a computer system, a computer-implemented method comprising:
receiving video data;
encoding the video data;
accepting control information other than the encoded video data, wherein the control information facilitates adjustment by a decoder of post-processing filtering of the video data after decoding of the encoded video data, the adjustment being based at least in part on processing capability available to the decoder; and
outputting the encoded video data as well as the control information for controlling post-processing filtering of the video data after decoding;
~~wherein the control information facilitates adjustment by a decoder of the post-processing filtering, the adjustment based at least in part on processing capability available to the decoder.~~
2. (Currently amended) The method of claim 1 further comprising: receiving input that indicates the control information.
3. (Previously presented) The method of claim 2 wherein a video encoder receives the input.
4. (Previously presented) The method of claim 2 wherein an application receives the input and provides the control information to a video encoder.
5. (Original) The method of claim 1 wherein a video encoder specifies the control information depending on one or more criteria, and wherein the one or more criteria include quantization step size and/or quality of the video data.
6. (Original) The method of claim 1 wherein the post-processing filtering includes applying a de-blocking filter.

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

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7. (Original) The method of claim 1 wherein the post-processing filtering includes applying a de-ringing filter.
8. (Original) The method of claim 1 wherein the control information comprises a level for the post-processing filtering.
9. (Original) The method of claim 1 wherein the control information comprises a maximum allowed level for the post-processing filtering.
10. (Original) The method of claim 1 wherein the control information comprises a minimum allowed level for the post-processing filtering.
11. (Original) The method of claim 1 wherein the control information comprises a filter type selection for the post-processing filtering.
12. (Original) The method of claim 1 further comprising entropy encoding the control information.
- 13-16. (Canceled)

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

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17. (Currently amended) A computer-readable medium storing computer-executable instructions for causing the computer system to perform ~~the method of claim 1~~ a computer-implemented method comprising:

receiving video data;

encoding the video data

accepting control information other than the encoded video data, wherein the control information facilitates adjustment by a decoder of post-processing filtering of the video data after decoding, the adjustment being based at least in part on processing capability available to the decoder;
and

outputting the encoded video data as well as the control information.

18. (Currently amended) A computer-implemented method comprising:

receiving encoded video data in a bitstream as well as control information in the bitstream for controlling post-processing filtering, the control information comprising data in the bitstream other than the encoded video data;

decoding the encoded video data;

determining available processing capability; and

adjusting, based at least in part upon the available processing capability and the control information, the post-processing filtering to be performed on the decoded video data.

19. (Original) The method of claim 18 wherein the post-processing filtering includes applying a de-blocking filter.

20. (Original) The method of claim 18 wherein the post-processing filtering includes applying a de-ringing filter.

21. (Original) The method of claim 18 wherein the control information comprises a level for the post-processing filtering.

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

Attorney Reference Number 3382-66954-01
Application Number 10/680,072

22. (Original) The method of claim 18 wherein the control information comprises a maximum allowed level for the post-processing filtering.

23. (Original) The method of claim 18 wherein the control information comprises a minimum allowed level for the post-processing filtering.

24. (Original) The method of claim 18 wherein the control information comprises a filter type selection for the post-processing filtering.

25. (Original) The method of claim 18 further comprising entropy decoding the control information.

26-29. (Canceled)

30. (Currently amended) A computer-readable medium storing computer-executable instructions for causing a computer system to perform ~~the method of claim 18~~ a computer-implemented method comprising:

receiving encoded video data in a bitstream as well as control information in the bitstream for controlling post-processing filtering, the control information comprising data in the bitstream other than the encoded video data;

decoding the encoded video data;

determining available processing capability; and

adjusting, based at least in part upon the available processing capability and the control information, the post-processing filtering to be performed on the decoded video data.

31-38. (Canceled)

39. (Previously presented) The method of claim 1 wherein the controlling post-processing filtering comprises skipping the post-processing filtering for at least some of the video data.

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

Attorney Reference Number 3382-66954-01
Application Number 10/680,072

40. (Previously presented) The method of claim 1 wherein the control information specifies that a video decoder should skip the post-processing filtering.

41-44. (Canceled)

45. (Previously presented) The method of claim 1 wherein the control information comprises:

information indicating whether or not post-processing filtering is to be performed after decoding; and

for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating a filter type selection for the post-processing filtering for the picture.

46. (Previously presented) The method of claim 1, wherein the control information includes a filter type selection for selecting from among plural available filter types.

47. (Previously presented) The method of claim 18, wherein determining available processing capability comprises determining available CPU cycles for applying post-processing filtering.

48. (Previously presented) The method of claim 18, further comprising performing the post-processing filtering.

49. (Previously presented) The method of claim 18, wherein the control information includes a filter type selection for selecting from among plural available filter types.

RCP:vjs 2/5/08 766828_3.doc 306570.01
PATENT

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Application Number 10/680,072

50. (Previously presented) The method of claim 18, wherein the control information comprises:

information indicating whether or not the post-processing filtering is to be performed after decoding; and

for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating a filter type selection for the post-processing filtering for the picture;

the method further comprising parsing the control information.

51. (Previously presented) The method of claim 50, wherein the parsing the control information comprises parsing identifying information indicating whether or not post-processing filtering is to be performed.

52. (Previously presented) The method of claim 51, wherein the parsing the control information further comprises, for each of the plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, parsing information indicating a filter type selection for the post-processing filtering for the picture.

53. (New) The computer-readable media of claim 17 wherein a video encoder specifies the control information depending on one or more criteria, and wherein the one or more criteria include quantization step size and/or quality of the video data.

54. (New) The computer-readable media of claim 17 wherein the post-processing filtering includes applying a de-blocking filter or a de-ringing filter.

55. (New) The computer-readable media of claim 17 wherein the control information comprises a level for the post-processing filtering.

56. (New) The computer-readable media of claim 17 wherein the control information comprises a maximum allowed level or a minimum allowed level for the post-processing filtering.

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

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Application Number 10/680,072

57. (New) The computer-readable media of claim 17 wherein the control information comprises:
information indicating whether or not post-processing filtering is to be performed after decoding; and
for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating a filter type selection for the post-processing filtering for the picture.
58. (New) The computer-readable media of claim 17, wherein the control information includes a filter type selection for selecting from among plural available filter types.
59. (New) The computer-readable media of claim 30 wherein the post-processing filtering includes applying a de-blocking filter or a de-ringing filter.
60. (New) The computer-readable media of claim 30 wherein the control information comprises a level for the post-processing filtering.
61. (New) The computer-readable media of claim 30 wherein the control information comprises a maximum allowed level or a minimum allowed level for the post-processing filtering.
62. (New) The computer-readable media of claim 30 wherein determining available processing capability comprises determining available CPU cycles for applying post-processing filtering.
63. (New) The computer-readable media of claim 30, wherein the control information includes a filter type selection for selecting from among plural available filter types.

RCF:vjs 2/5/08 766828_3.doc 306570.01
PATENT

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64. (New) The computer-readable media of claim 30, wherein the control information comprises:

- information indicating whether or not the post-processing filtering is to be performed after decoding; and
- for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating a filter type selection for the post-processing filtering for the picture;

the method further comprising parsing the control information.